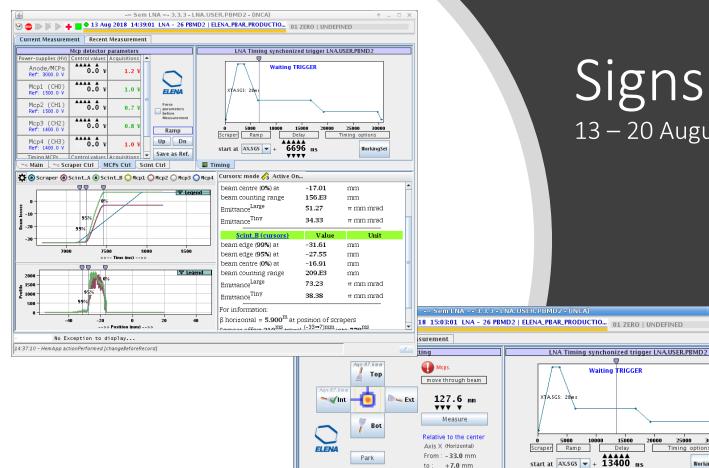
Progress on electron cooling @ELENA

13 September 2018



6000

Main Scraper Ctrl MCPs Ctrl Scint Ctrl

Scraper O Scint_A Scint_B Mcp1 Mcp2 Mcp3 Mcp4

14160 14180 14200 14220 14240 14260

-->> Position (mm) -->>

No Exception to display... 15:02:53 - HemApp actionPerformed [changeBeforeRecord]

Signs of cooling?

13 – 20 August 2018

WorkingSet

π mm mrad

 π mm mrad

π mm mrad

π mm mrad

mm

Cursors: mode 🗞 Active On...

Emittance^{Tiny}

beam edge (99%) at

beam edge (95%) at

beam centre (0%) at

Emittance^{Large}

Emittance^{Tiny}

For information:

beam counting range

Scraper Velocity: 51 mm.s

5.16

3.44

Value

-19.17

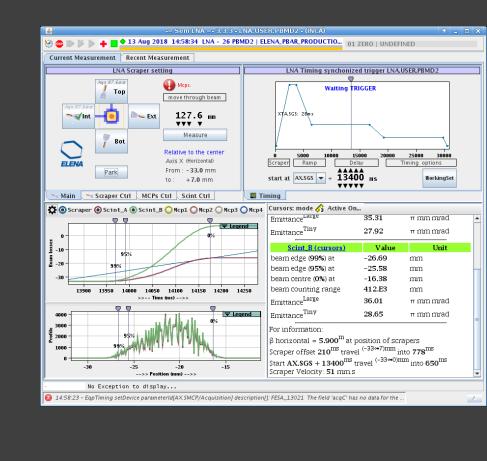
-18.27 -14.77

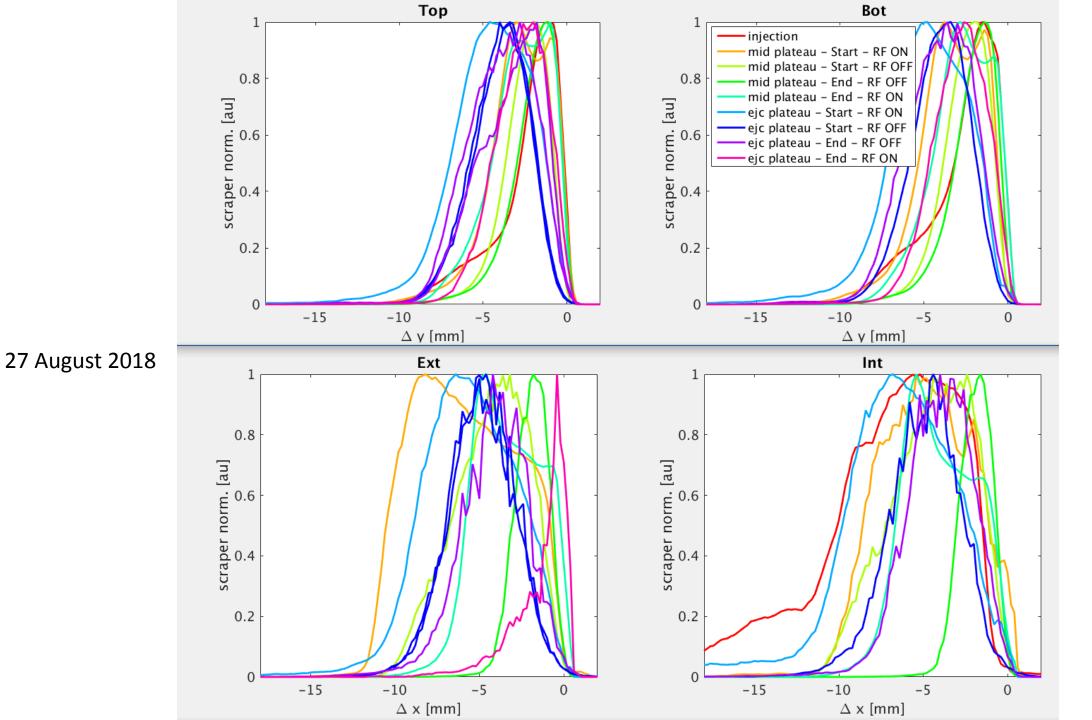
318.E3

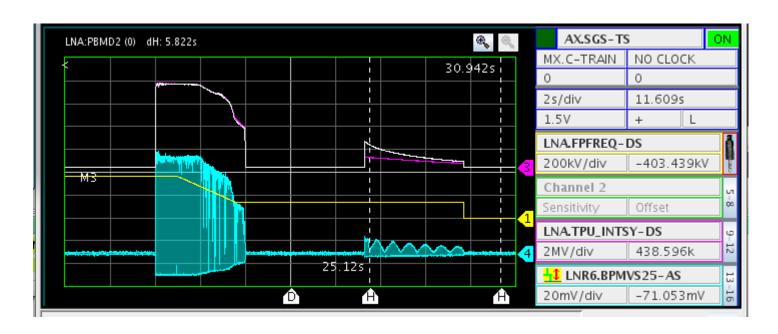
6.57

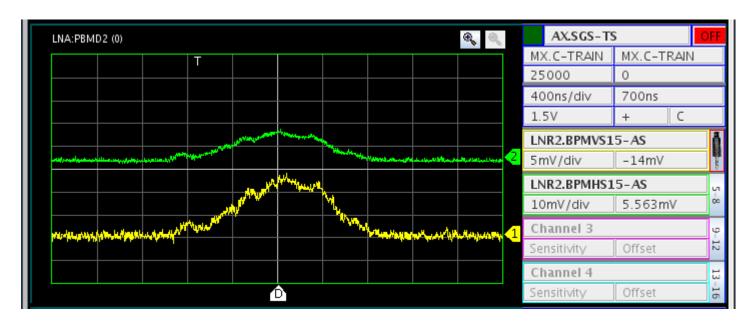
4.14

β horizontal = 5.900^m at position of scrapers Scraper offset 210 ms travel (-33∞7)mm into 776 ms Start AX.SGS + 13400 ms travel (-33∞0)mm into 649 ms

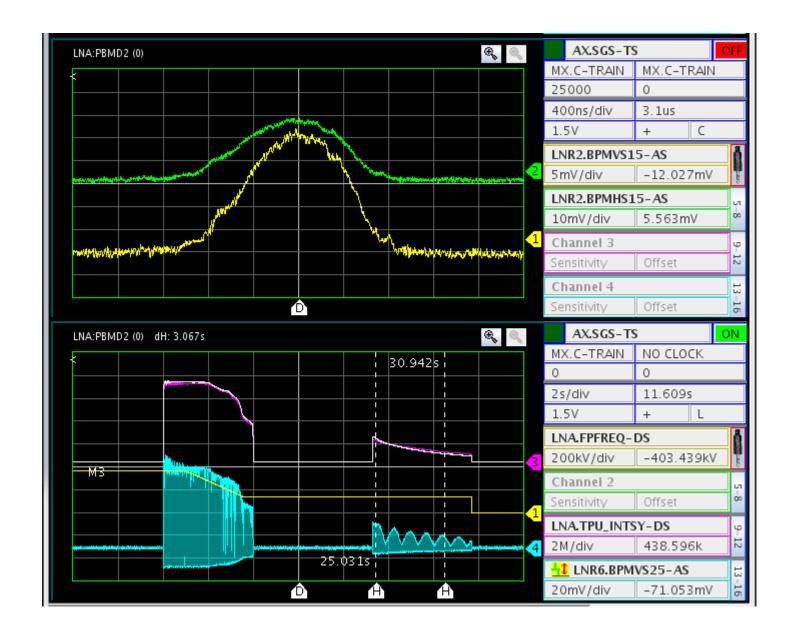








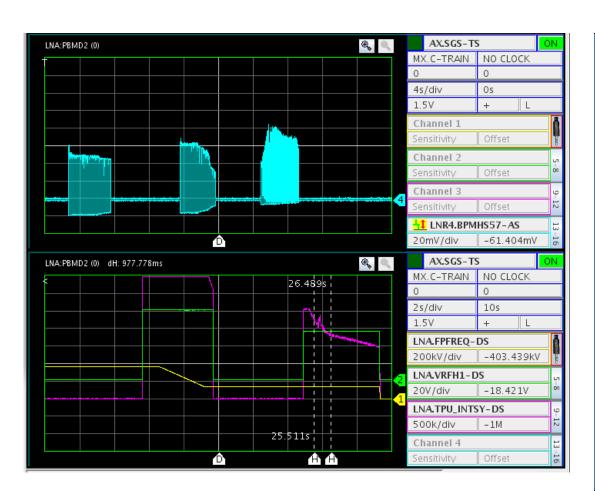
29 August 2018 Cooling at 100 keV Adjusting e-energy at 100 keV by 0.1 V to 60.66V





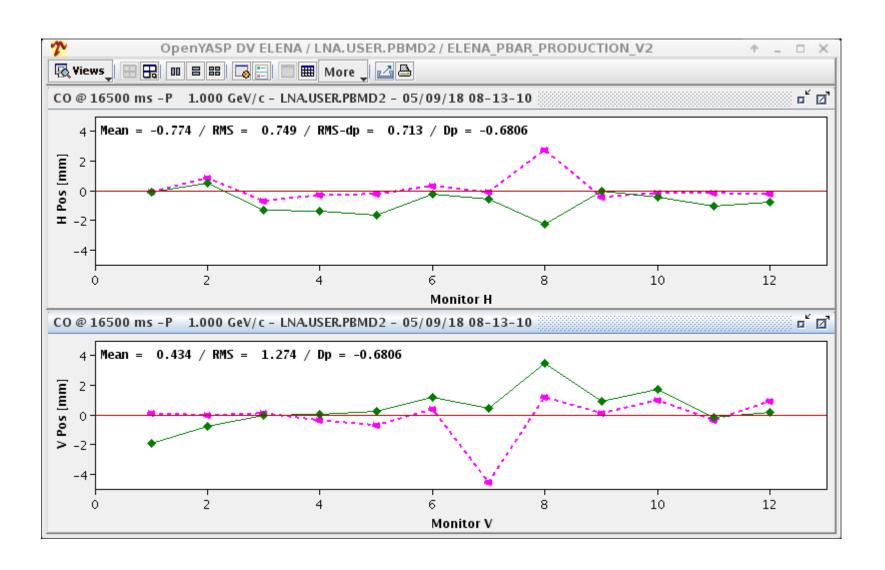
Bunched beam cooling at 100 keV

31 August 2018 – ELENA Electron Cooler fine-tune coils switched on for the first time!





5 September 2018 – Electron Cooler pbar bump studies



Keep it local?

H: -1 to +11 mm

V: -2 to +5 mm

Angle

H: -3 to +3 mrad

V: -1 to +5 mrad

